

EPI Update for Friday, March 30, 2007

Center for Acute Disease Epidemiology

Iowa Department of Public Health

Items for this week's EPI Update include:

- ***E. coli* outbreak: essential partnerships**
- **Tick season and tick diseases**
- **Beware of skunks!**
- **Meeting announcements and training opportunities**

***E. coli* outbreak: essential partnerships**

In the fall of 2006, an outbreak of over 200 cases of *E. coli* H7:O157 gastroenteritis, including one death, was epidemiologically linked to raw spinach grown in the Salinas Valley in California. Investigators from the CDC, the FDA, state and federal laboratories and state and local health departments, working together, were able to link illness to raw spinach, prompting a nationwide recall of spinach. See

www.dhs.ca.gov/ps/fdb/local/PDF/2006%20Spinach%20Report%20Final%20redacted.PDF.

Key parts of the investigation described in the report include:

- Laboratories using the Pulsenet system made the genetic subtyping (DNA fingerprint) available, enabling nationwide recognition of the outbreak and of all the cases involved in this outbreak;
- State health departments interviewed patients with illness, collected spinach samples, and information about the spinach purchases;
- The FDA and the State of California worked with growers and packers to identify the fields in which the spinach was grown; and
- These investigations matched the genetic subtype of *E. coli* (from spinach that patients had eaten and the patients themselves), with cattle and wild pigs that were living in the vicinity of the fields.

Tick season and tick diseases

Ticks are again becoming active in Iowa woods and fields. We have three species of ticks in Iowa and three diseases carried by ticks. The public is most likely to encounter the American dog tick (*Dermacentor variabilis*), which can transmit Rocky Mountain spotted fever (RMSF). This disease, characterized by fever, headache, muscle pain and rash, is found primarily in the southeastern states, but is sometimes diagnosed in Iowa. (Today only a few cases are diagnosed in the Rocky Mountain area). RMSF is caused by *Rickettsia rickettsii* (an obligate intracellular bacteria). RMSF can be fatal but is readily treated with antibiotics. See www.cdc.gov/ncidod/dvrd/rmsf/Signs.htm.

The black legged tick, *Ixodes scapularis*, is found in Eastern Iowa and can transmit Lyme disease. Up to 80 percent of patients with Lyme disease erythema migrans (EM), a characteristic bull's-eye rash (red ring rash around a central clearing.) The disease can progress to arthritis, brain and nervous system symptoms and heart problems. Lyme disease is treated using doxycycline or amoxicillin. See www.cdc.gov/ncidod/dvbid/lyme/index.htm.

The third tick is less well known; it is the Lone Star tick, *Amblyomma americanum* and is primarily found in southern Iowa counties. The disease it carries is ehrlichiosis. See www.cdc.gov/ncidod/dvrd/ehrlichia/Index.htm.

Preventing tick bites, prevents all of these diseases. When in a tick filled area, people should wear long pants, long sleeves if possible, and insect repellent. Clothing treated with permethrin also repels ticks. See www.cdc.gov/ncidod/dvbid/lyme/Prevention/Id_Prevention_Avoid.htm.

Beware of skunks!

Whether you're a professional advising the public or a kind-hearted animal lover wanting to help an orphaned baby, please be aware of the dangers of skunks. While skunks are smart and interesting animals, they are the main reservoir of rabies in Iowa. They can be born carrying rabies, so just adopting a baby skunk is no guarantee that it is free of rabies. In addition, there is no rabies vaccine for skunks, so skunks should never be kept as pets.

Meeting announcements and training opportunities

Hope to see some of you at Iowa Public Health Association Conference next week.

Have a healthy and happy week!

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